

REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application.

In The Drawings

Box 11 of page 1 of the Office Action Summary has been checked with an "X", indicating that the proposed drawing correction filed on 10 June 2003, is approved, and further indicating that, as a result, corrected drawings are required in "reply to this Office action". However, Applicant has confirmed via telephone contact with the Examiner, that such corrected drawings have already been filed, and that corrected drawings are therefore not required in this reply.

Claim Objections

Claim 97 is objected to as being in improper form because it depends on canceled claim 68. Claim 97 has been amended to depend from claim 91. The objection to claim 97 may now be removed.

§112 Rejections

Claim 96 is rejected under 35 USC 112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claim 96 to clarify the subject matter which Applicant regards as the invention. Specifically, claim 96 has been amended to recite an "assembly that comprises the clip and the packaging material, the clip and the packaging material being attached

1 to one another". Applicant respectfully submits that the 35 USC 112 rejection of
2 claim 96 may now be removed.

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4 **§103 Rejections**

5 Claims 91, 95, 96, 77, 80-83, 85 and 86 are rejected under 35 U.S.C.
6 §103(a) as allegedly being unpatentable over US Patent No. 5,419,712 to Bellomo
7 et al. in view of US Patent No. 5,451,815 to Taniguchi et al. Applicant
8 respectively traverses the rejection.

9 Independent claim 91 recites the following:

10
11 A chip package comprising:

12 packaging material having a first side;
13 a flexible lead extending from the first side; and
14 a clip extending from the packaging material.

15
16 Bellomo teaches an edge card interconnection system that provides
17 "enhanced electrical interconnection between *a module and a circuit board.*"
18 (Abstract; col. 2, lines 32-34; emphasis added). "Edge card interconnection
19 systems are known for interconnecting modules with electronic printed circuit
20 boards. Known modules, such as single in-line memory modules (SIMM) and
21 electronic sub-assembly daughter board modules require interconnection with a
22 main electronic module or mother board, which typically involves implementing
23 an edge connection scheme wherein *contact pads on the edge of the module* are
24 engagable with contacts in a connector or socket on the main module or
25 motherboard." (col. 1, lines 14-23, emphasis added).

1 The Office Action asserts that Bellomo discloses, at Fig. 5, a chip package
2 comprising a packaging material having a first side. However, it is clear from the
3 above discussion of Bellomo, as well as from Fig. 5 of Bellomo, that Bellomo
4 does not teach a chip package at all. Bellomo teaches an edge card
5 interconnection system that provides "enhanced electrical interconnection between
6 *a module and a circuit board*." It is well-known that a module such as discussed
7 in Bellomo, is not the same as a "chip package" as recited in Applicant's claim 91.
8 Rather, a module is an assembly of components that has some distinct function,
9 such as a RAM module consisting of several RAM chips mounted on a small
10 circuit board. Bellomo states that, "Known modules, such as single in-line
11 memory modules (SIMM) and electronic sub-assembly daughter board modules
12 require interconnection with a main electronic module or mother board, which
13 typically involves implementing an edge connection scheme wherein *contact pads*
14 *on the edge of the module* are engagable with contacts in a connector or socket on
15 the main module or motherboard." (col. 1, lines 14-23, emphasis added). It is
16 well-known that a SIMM (single in-line memory module) is a module containing
17 one or several random access memory (RAM) chips on a small circuit board with
18 PINs that connect to a computer motherboard. Thus, it is clear that a module is
19 not itself, a "chip package" as recited in Applicant's claim 91. Therefore, contrary
20 to the assertion by the Office Action, Bellomo does not teach a chip package
21 comprising a packaging material having a first side.

22 Furthermore, the Office Action asserts that Bellomo discloses "a lead (34)
23 extending from a first side of the packaging material [of the chip package]." (page
24 3, Office Action). First of all, as clarified above, Bellomo does not disclose a chip
25 package comprising a packaging material having a first side. For this reason

1 alone, it is clear that Bellomo cannot possibly disclose a lead extending from a
2 first side of the packaging material of a chip package.

3 Moreover, the "lead (34)" to which the Office Action refers in Bellomo is
4 not in any respect, "extending" from the side of anything. Rather, Bellomo's "lead
5 (34)" is actually a "contact pad (34)" (col. 4, lines 14-41). Bellomo states that
6 contact pads (34) are "disposed along an edge of a module 36 to be electrically
7 interconnected with a main circuit board 33." Thus, contact pads 34 are not
8 "extending" from the side of the module 36, much less from the side of a chip
9 package. A simple glance at Bellomo's Fig. 5 makes it clear that Bellomo's
10 "contact pads 34" are not a "lead extending from the first side" of a chip package
11 as Applicant's claim 91 recites. Rather, Fig. 5 shows contact pads 34 that are
12 flush with the module, which is nothing like a "lead extending from the first side"
13 of a chip package. Furthermore, because Bellomo's contact pads 34 are flush with
14 the module, they cannot be "flexible", which is another element of claim 91.

15 Thus, it is clear that Bellomo does not teach a chip package comprising a
16 packaging material having a first side; that Bellomo does not teach a "lead
17 extending from the first side" of a chip package; and, that Bellomo does not teach
18 a "flexible lead extending from the first side" of a chip package.

19 A prima facie case of obviousness requires, among other things, that the
20 prior art reference (or references when combined) must teach or suggest all the
21 claim limitations. Since Bellomo alone is relied upon as showing the elements of
22 a chip package comprising packaging material having a first side and a lead
23 extending from the first side, as recited in claim 91, and since Bellomo does not
24 describe or suggest th s elements, the obviousness rejection of claim 91 is not
25 valid. Accordingly, Applicant respectfully requests that the rejection be removed.

1 Regarding claim 91, Taniguchi is cited only for its purported teaching of
2 compressible flexible leads, and not for any suggestion of a lead extending from
3 the first side of a chip package. Accordingly, Taniguchi does not remedy the
4 deficiencies of Bellomo noted above, and claim 91 is allowable over the
5 combination of these two references.

6 Furthermore, Taniguchi does not teach compressible flexible leads as the
7 Office Action asserts. The Office Action indicates that Taniguchi teaches
8 compressible flexible leads (14, Fig. 3) to enable a flexible mounting (col. 3, lines
9 62-64). It is true that the word "flexible" appears in Taniguchi. However,
10 nowhere does Taniguchi teach or imply anything about flexible leads. The
11 "wiring lines 14" of Fig. 3 in Taniguchi are most certainly not flexible. The
12 "wiring lines 14" of Fig. 3 in Taniguchi are most certainly not leads. Rather, the
13 "wiring lines 14" of Fig. 3 in Taniguchi are printed circuit lines formed on a
14 circuit board, and they are *internal* to the semiconductor device 10. These "wiring
15 lines 14" are not "leads" at all, and they most certainly are not a "lead extending
16 from the first side" of a chip package. They are *internal* to the semiconductor
17 device 10. Furthermore, such "wiring lines 14" are not intended to be "flexible".
18 The "wiring lines 14" are *internal* printed circuit lines to the semiconductor device
19 10 that would certainly be destroyed, along with the semiconductor device 10, if
20 they were flexed. Thus, Taniguchi does not teach compressible flexible leads as
21 the Office Action asserts.

22 For these additional reasons, it is clear that Bellomo and Taniguchi, alone
23 or in combination, fail to teach all the elements of Applicant's claim 91. Thus, the
24 obviousness rejection of claim 91 under 35 U.S.C. §103(a) cannot stand, and
25 Applicant respectfully requests that the rejection be removed.

1 Furthermore, with respect to claim 91, the Office Action fails to address the
2 element which recites "a clip extending from the packaging material". With
3 respect to claim 95, the Office Action does baldly assert that Bellomo shows "the
4 clip being integral with the packaging material", but the Office provides no
5 location in Bellomo where such a "clip" is discussed. Nonetheless, Applicant is
6 unable to find any teaching or suggestion of such a "clip being integral with the
7 packaging material" of a chip package in either Bellomo or Taniguchi.

8 For these additional reasons, it is clear that Bellomo and Taniguchi, alone
9 or in combination, fail to teach all the elements of Applicant's claim 91. Thus, the
10 obviousness rejection of claim 91 under 35 U.S.C. §103(a) cannot stand, and
11 Applicant respectfully requests that the rejection be removed.

12 All remaining rejected claims 70-75, 77, 80-83, 85-86 and 91-96, depend
13 either directly or indirectly from independent claim 91, and therefore incorporate
14 the elements of claim 91. Therefore, all remaining rejected claims 70-75, 77, 80-
15 83, 85-86 and 91-96, are allowable at least by virtue of their dependency from
16 allowable claim 91. Applicant therefore respectfully requests that the rejection to
17 claims 70-75, 77, 80-83, 85-86 and 91-96, be removed.

18 Regarding claims 70-75 and 92, Cutchaw (US 4,293,175) is cited only for
19 its purported teaching of "a flexible insert (110) interposed between the lead (98a)
20 and the first side of the packaging material (92a) to provide a flexible and aligned
21 contact with the mating element" (Office Action, page 5) and a "lead having a
22 substantial C-shape" (Office Action, page 6). However, Cutchaw is not cited for,
23 nor can Applicant locate in Cutchaw, any suggestion of a chip package comprising
24 a packaging material having a first side; a "lead extending from the first side" of a
25 chip package; or, a "flexible lead extending from the first side" of a chip package,

1 which are all elements included in claims 70-75 and 92 through their dependency
2 from claim 91. Accordingly, Cutchaw does not remedy the deficiencies of
3 Bellomo and Taniguchi noted above, and claims 70-75 and 92 are allowable over
4 the combination of these three references for these additional reasons.

5 Regarding claims 93 and 94, Sonobe (US 4,636,022) is cited only for its
6 purported teaching of "a package (10) having an indentation (see Fig.5), an end of
7 the lead being disposed within the pocket when the lead is compressed, to protect
8 the least from external tampering" (Office Action, page 6). However, Sonobe is
9 not cited for, nor can Applicant locate in Sonobe, any suggestion of a chip package
10 comprising a packaging material having a first side; a "lead extending from the
11 first side" of a chip package; or, a "flexible lead extending from the first side" of a
12 chip package, which are all elements included in claims 93 and 94 through their
13 dependency from claim 91. Accordingly, Sonobe does not remedy the
14 deficiencies of Bellomo, Taniguchi and Cutchaw noted above, and claims 93 and
15 94 are allowable over the combination of these four references for these additional
16 reasons.

17 For at least the reasons stated herein above, which make clear that the
18 rejected claims, 70-75, 77, 80-83, 85-86 and 91-96, are allowable over the cited
19 references, Applicant respectfully requests that the rejection to claims 70-75, 77,
20 80-83, 85-86 and 91-96 be removed.

21 22 Conclusion

23 All pending claims are in condition for allowance. Applicant respectfully
24 requests reconsideration and prompt issuance of the subject application. If any
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1 issues remain that prevent issuance of this application, the Examiner is urged to
2 contact the undersigned attorney before issuing a subsequent Action.

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4 Respectfully Submitted,

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6 Dated: 11/03/03

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